

BEFORE THE POLLUTION CONTROL HEARINGS BOARD
OF THE STATE OF WASHINGTON

THURSTON COUNTY,

Appellant,

v.

State of Washington
DEPARTMENT OF ECOLOGY,

Respondent.

and CITY OF OLYMPIA,

Intervenor-Respondent.

PCHE No.88-123

REVISED FINAL FINDINGS OF FACT,
CONCLUSIONS OF LAW
AND ORDER

Thurston County has appealed the State of Washington Department of Ecology's ("DOE") issuance of Order DE 88-S257. Thurston County challenges only that part of the Order which imposes a septic tank moratorium if there is failure to meet compliance dates.

A formal hearing was held on January 25-26, 1989, in Lacey, Washington. Present for the Board were: Judith A. Bendor, Presiding; Wick Dufford, Chairman, and Harold S. Zimmerman, Member. Appellant Thurston County was represented by Deputy Prosecutor Tom Bjorgen. Respondent Department of Ecology was represented by Assistant Attorney General Charles W. Lean. Respondent-Intervenor City of Olympia was represented by Attorney Mark O. Erickson. Court reporter Janet Neer of Robert H. Lewis & Associates (Tacoma) recorded the proceedings.

Pre-hearing briefs were filed and opening statements were made. Witnesses were sworn and testified. Exhibits were admitted. Closing arguments were made. On March 27, 1989, the Board issued a Final Order affirming the Order.

1 On April 4, 1989, Thurston County filed a Petition for
2 Reconsideration with an affidavit and exhibit in support. On April
3 14, 1989, respondents filed their replies.

4 From all the evidence and counsel's contentions, the Board issues
5 the following revised Order:

6 FINDING OF FACT

7 BACKGROUND

8 I

9 Pursuant to a 1976 Intergovernmental Contract, Thurston County,
10 and the cities of Olympia, Lacey and Tumwater (collectively "LOTT")
11 currently operate a wastewater sewage treatment plant and outfalls
12 discharging into Budd Inlet.

13 The cities operate sewage collection systems which convey raw
14 sewage to the LOTT treatment plant. Although the County does not now
15 own or operate any sewage collection systems, it is a full participant
16 in the LOTT sewage collection planning process. The County Health
17 Department issues permits for any "on-site" sewage treatment systems.
18 (This opinion will use the collective term "septic tanks" for on-site
19 sewage treatment systems.)

20 II

21 The sewage treatment plant discharges into Budd Inlet are subject
22 to a National Pollutant Discharge Elimination System (NPDES) permit
23 No. WA-003706-1 ("permit") issued by the DOE on September 25, 1987.
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1 DOE is responsible for conducting a waste discharge permit system
2 which meets the requirements of federal and state law. This permit
3 contains a number of conditions, including a schedule with compliance
4 dates for planning, designing and constructing improvements in
5 treatment, including attaining nitrogen removal by 1993, and
6 increasing plant hydraulic capacity. All parties agree that the water
7 quality situation in Budd Inlet is significantly adversely affected by
8 the treatment plant's current discharges, due to the discharges'
9 nitrogen levels and the Inlet's poor flushing. These NPDES compliance
10 schedules are ones suggested by LOTT.

11 III

12 The permit requires, inter alia, that by April 1, 1988 LOTT
13 submit to DOE a final Phase IV report and a final interlocal
14 agreement. (S.13a).

15 On February 1, 1988, the Department issued a letter to LOTT
16 indicating that if the final interlocal agreement were not submitted
17 by April 1, 1988, DOE would consider enforcement, including possible
18 penalties, and a sewer ban.

19 On April 20, 1988, DOE issued Notice of Violation,
20 No. DE 88-S258, to Thurston County stating that the April 1, 1988
21 deadline had been missed and required the County to file a full report
22 within 30 days of what it intended to do, and thereafter "the
23 department shall issue such an order or directive as it deems
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(3)

appropriate under the circumstances...". Thurston County replied. On July 21, 1988, DOE issued Order DE No. 88-S257.

This Order recited the past violation of the NPDES April 1, 1988 requirement, (S.13a), and ordered compliance with revised dates. The first revised compliance date is March 31, 1989 for condition S.3a(4), for submitting the sewage treatment plant hydraulic improvements engineering report to DOE. The nitrogen removal engineering report is to be submitted October 1, 1989. The final revised date is April 1, 1993 for nitrogen removal to be on-line and for the facility to achieve permit limits (S.3a(13)). These dates represent a six-month slippage from the dates in the NPDES permit.

The Order imposes a septic tank moratorium in the LOTT Urban Growth Mangement Boundary Area ("UGMA") on the day following failure to meet any revised compliance date in the Order. The moratorium would be lifted when Thurston County was again complying with the Order's compliance schedule.

DOE issued similar orders to the three LOTT cities. Their Orders contain a moratorium provision preventing sewer hook-ups when compliance dates are not met.

Only Thurston County is actively appealing its Order, soley contesting the septic tank moratorium.¹

¹ The City of Olympia appealed the order issued to it. The DOE and the City have represented that settlement is likely in that appeal. No hearing on the merits is currently scheduled.

IV

The planned treatment plant upgrade and expansion and the collection systems extensions are due to water quality problems in Budd Inlet and the threat to groundwater resulting from rapid growth in areas served by septic tanks.

Chronic quality problems in Budd Inlet are well documented and undisputed by Thurston County. There have been a number of fish kills and ambient water quality violations in Budd Inlet over the past fifteen years. The inner, southern portion of Budd Inlet (south of Priest Point) is poorly flushed, regardless of the season. Nutrients in the water are causing algal blooms which then decompose causing depletion of dissolved oxygen. This in turn stresses and kills marine life. Expeditious plant improvements to remove nitrogen are essential to improving Budd Inlet's water quality.

V

The Thurston County area's geology is dominated by features resulting from and influenced by past glacial activity. The area was the terminus (or stopping point) of the last glacial advance.

The area's soils are predominantly unconsolidated coarse sands and gravels deposited by the glacier. Such soils are highly permeable, allowing water to be rapidly transmitted, and reducing the soils' effectiveness for treating wastes. Water transmission rates vary, from one foot to one hundred feet per day, depending on

1 localized soils and the slope of the groundwater gradient. There also
2 exist some lenses of hardpan soil in the area (5% to 10%) which are
3 less transmissable.

4 In sum, the geology of the area is complex. The soils are
5 predominantly highly permeable.

6 VI

7 Septic tanks release nitrates into the groundwater. Nitrates
8 significantly contaminate Thurston County's groundwater. Nitrates are
9 not easily treated by the soils, and generally move easily into
10 groundwater, especially in the areas that have coarse, poorly
11 consolidated soils. Nitrates are a generally accepted indicator of
12 the contamination of groundwater by sewage or fertilizer.

13 VII

14 The most important source of drinking water in Thurston County is
15 McAllister Springs. At least 45,000 people in the cities of Olympia
16 and Lacey and in unincorporated Thurston County rely on the Springs
17 for their water supply.

18 The Springs are located east of the City, within the UGMA
19 boundary. The Springs provide a source of high quality water, and an
20 economical and energy efficient supply since no pumping is required to
21 bring the water to the surface. The water is free of high levels of
22 iron, manganese and sulfurous gases that exist in a number of public
23 water supply wells in the County.

1 Almost 100% of Thurston County domestic water supply is from
2 unprotected or shallow aquifers which are overlaid by relatively
3 permeable soils.

4 The Springs themselves are fed by groundwaters flowing primarily
5 from the east, west, and south. The fastest growing area of Thurston
6 County lies between the City of Lacey and the Nisqually River,
7 directly over the groundwater that feeds the Springs. The area is not
8 sewered and relies on septic tanks. The County has imposed
9 restrictions on this area (known as Geologically Sensitive Area -
10 GSA), which includes some limitations on septic tanks.

11 VIII

12 Thurston County is one of the state's fastest growing counties,
13 gaining 18% in population from 1980 through 1987. LOTT estimates that
14 by the year 2010 the population within its study area will nearly
15 double. The sewerred population is projected to rise from about 40,000
16 to nearly 105,000 people, and the population using septic tanks is
17 projected to increase from about 60,000 to 90,000 people. These
18 assumptions are based upon plans to sewer additional areas, with the
19 discharges going to the Budd Inlet treatment plant.

20 The presupposition for spending large sums of money for sewer
21 expansion is that unsewered development presents an unacceptable
22 threat of groundwater contamination.

IX

There is a definite trend of increasing nitrates in water from the McAllister Springs GSA. Mean nitrate levels have increased from .93 mg./liter for 1972-1977, to 1.42 mg./liter for 1982-1987. These increasing readings includes the period during which most of the residential development in the area has occurred.

There are also elevated nitrate readings in the water supply elsewhere in the County, especially within the UGMA boundaries. These readings are as high as 4.67 mg./liter. (See especially Exhibit A-7).

The maximum health level allowed by state and federal law for nitrates in drinking water is 10 mg./liter. At least two states, however, have a warning or preventative action level of 2 mg./liter. The Washington State Department of Ecology is in the process of setting warning levels for this state and is considering 2 mg./liter as the warning level for nitrates. A preventative action level for nitrates of 1 mg./liter is currently in use in the Methow Valley of Washington State.

X

The full negative effect of current unsewered development on groundwater quality in Thurston County has not been completely determined, either because of data gaps, or because nitrate-laden sewage from recent development may not have yet reached all drinking water aquifers.

1 Nonetheless, current nitrate levels in the UGMA are elevated and
2 as Thurston County stated when it imposed the McAllister Spring
3 limitations:

4 Groundwater contamination is generally
5 irreversible and extremely difficult to clean up.
6 Prevention is the only feasible approach to
7 groundwater pollution and prevention can only be
accomplished by regulating potentially threatening
land uses above the aquifer.

8 XI

9 Moreover, once development occurs using septic tanks or other
10 on-site systems, it is, as a practical matter, very difficult to
11 persuade residents to have their areas sewered and to pay for such
12 increased costs. This pattern is true in Thurston County. And unless
13 sewerage occurs, the groundwater continues to be subject to
14 contamination from septic-tank released nitrates.

15 XII

16 If a Department of Ecology imposed sewer hook-up moratorium were
17 only in effect against the three LOTT cities, and the Departments'
18 septic tank moratorium were not imposed on the County, then
19 development is likely to largely continue unsewered.²

20 This unsewered development in the UGMA has the high potential to
21 further exacerbate already existing groundwater problems.

22 The ban is necessary to protect the groundwater within the UGMA.

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2 There would still remain the County's two-year McAllister Springs
25 area restrictions, as well as possible limitations for new development
within a couple hundred feet of existing sewer lines.

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XIII

There are also some elevated nitrate readings in Thurston County areas outside the UGMA. Nonetheless, while the UGMA as a moratorium boundary may be somewhat under-inclusive, we find that given practical constraints, the boundary is reasonably related to groundwater problems. The area where the growth is expected is logically the area to select for greatest increased pollution potential. There is a clear and sufficient nexus for this moratorium.

XIV

Any Conclusion of Law deemed to be a Finding of Fact is hereby adopted as such. From these Findings of Fact, the Board makes these

CONCLUSIONS OF LAW

I

The Board has jurisdiction over these parties and these issues. Chapter 43.21B RCW.

II

We review Order DE 88-S257 under a de novo standard of review, to determine whether the Order constitutes a proper exercise of discretion in this instance. Port Ludlow Bay Committee v. Department of Ecology, et al., PCHB No. 84-89.

III

The state water pollution control law empowers the Department of Ecology to issue "appropriate orders under the circumstances" to

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1 dischargers to accomplish the purposes of Chapter 90.48 RCW, the State
2 Water Pollution Control Act. RCW 90.48.120.

3 Groundwaters are "waters of the state" under RCW 90.48.020. See,
4 Cascade Pole v. Department of Ecology, PCHB No. 87-65 (June 29, 1988.)

5 Nitrates from septic tanks go into Thurston County's groundwater
6 largely untreated and constitute "pollution". RCW 90.48.020. The
7 nitrates are likely in this case to render Thurston County's
8 groundwater harmful, detrimental or injurious to public health. Id.

9 One of the key goals of Chapter 90.48 RCW is to prevent and
10 control pollution of Washington state waters. RCW 90.48.010.

11 IV

12 We conclude under all the facts and circumstances of this case
13 the Order DE 88-S257 is appropriate to prevent and control pollution.
14 RCW 90.48.120(1). There was a violation of the NPDES compliance
15 schedule for improving the LOTT treatment plant and increasing its
16 capacity. The County, as a full participant in LOTT, is thus a
17 critical partner in the planning and design efforts keyed to the
18 deadlines necessary for any LOTT plant upgrade or expansion. Without
19 a timely plant upgrade, unsewered development is likely to occur at
20 significant levels. This has the potential to further pollute
21 Thurston County groundwater. Order No. DE 88-S257 is designed to
22 prevent further slippage in implementing water quality improvements.
23

V

Any Finding of Fact deemed to a Conclusion of Law is hereby adopted as such. From these Conclusions of Law, the Board enters this

ORDER

The Order is revised and the Petition for Reconsideration is DENIED. Department of Ecology Order No. DE 88-S257 is AFFIRMED.

DONE this 3rd day of May, 1989.

POLLUTION CONTROL HEARINGS BOARD

Judith A. Bendor
JUDITH A. BENDOR, Presiding

Wick Dufford
WICK DUFFORD, Chairman

Harold S. Zimmerman
HAROLD S. ZIMMERMAN, Member

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